

WHAT IS CLAIMED IS:

1. A method of making glycosides using a non-cryogenic process comprising the steps of:
 - 5 (a) lithiating an aromatic reactant having a leaving group using a lithium reagent in a first microreactor under non-cryogenic conditions to form a lithiated anion species; and
 - (b) coupling the lithiated anion species with a carbonyl substituted reactant to form a glycoside.
- 10 2. The method according to claim 1, wherein said lithiating step is performed at a temperature of from about -10°C to about 20°C.
3. The method according to claim 2, wherein said lithiating step is performed at a
15 temperature of from about -10°C to about 5°C.
4. The method according to claim 1, wherein the residence time in said first microreactor is from about 2 seconds to about 3 seconds.
- 20 5. The method according to claim 1, wherein said aromatic reactant is a halide.
6. The method according to claim 1, where said lithium reagent is selected from the group consisting of n-BuLi and t-BuLi.
- 25 7. The method according to claim 1, wherein a yield of said glycoside is greater than about 80%.
8. The method according to claim 1, wherein said coupling step is performed under cryogenic conditions.
- 30 9. The method according to claim 8, wherein said coupling step is performed at a temperature of less than about -80°C.

10. The method according to claim 1, wherein said coupling step is performed in a second microreactor under non-cryogenic conditions.
11. The method according to claim 10, wherein said coupling step is performed at
5 a temperature of from about -20°C to about 20°C.
12. The method according to claim 11, wherein said coupling step is performed at a temperature of about -10°C.
- 10 13. The method according to claim 10, wherein the residence time in said second microreactor is from about 2 seconds to about 3 seconds.
14. The method according to claim 10, wherein a yield of said glycoside is greater than about 70%.
- 15 15. A method of making glycosides using a non-cryogenic process comprising the steps of:
- (a) lithiating an aromatic reactant having a leaving group using a lithium reagent to form a lithiated anion species; and
- 20 (b) coupling the lithiated anion species with a carbonyl substituted reactant in a microreactor under non-cryogenic conditions to form a glycoside.
16. The method according to claim 15, wherein said coupling step is performed at a temperature of from about -10°C to about 20°C.
- 25 17. The method according to claim 15, wherein said coupling step is performed at a temperature of from about -10°C to about 5°C.
18. The method according to claim 15, wherein the residence time in said
30 microreactor is from about 2 seconds to about 3 seconds.

19. The method according to claim 15, wherein said lithiating step is performed under cryogenic conditions.

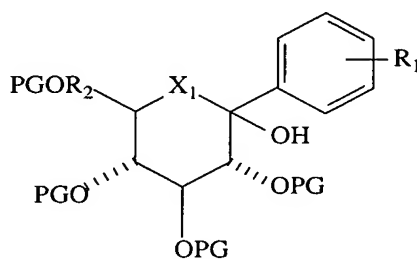
20. The method according to claim 1, further comprising the step of :

5 (c) deprotecting the glycoside.

21. A glycoside formed by the method of claim 1.

22. A method of making a glycoside having the general structural formula [I]:

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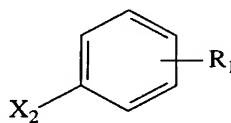


[I]

wherein: R_1 is hydrogen, NO_2 , OR_4 , a halogen, or a substituted or non-substituted alkyl, aryl, or heterocycle; R_2 is a substituted or non-substituted alkyl group, wherein

15 R_4 is a substituted or non-substituted alkyl or aryl; X_1 is a heteroatom; and PG is a protective group,

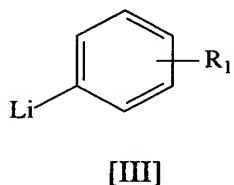
the method including the steps of: (a) reacting an aromatic reactant having general structural formula [II]:



[II]

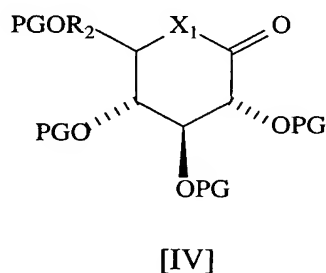
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wherein: R_1 is as defined previously and X_2 is a leaving group, in a first microreactor with an organo lithium reagent to form a lithiated anion species having general structural formula [III]:



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wherein R_1 is as defined previously, and (b) coupling the lithiated anion species [III] with a carbonyl substituted compound having general structural formula [IV]:



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wherein: R_2 , X_1 and PG are as described previously, to form the compound having general structural formula [I].

23. The method of claim 22 wherein the lithiating step is performed at a
15 temperature of from about -10°C to about 20°C .

24. The method of claim 23 wherein the coupling step is performed in a second microreactor under con-cryogenic conditions.

20 25. The method of claim 23 wherein the lithiating step is conducted in a solvent selected from THF/toluene or THF/heptane.

26. The method of claim 23 wherein the coupling step is performed in a second microreactor under non-cryogenic conditions.

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27. The method of claim 26 wherein the coupling step is performed at a temperature of from about -20°C to about 20°C.